

U.S. Serial No. 09/666,928  
Filing Date: September 21, 2000  
Docket: 10188  
Page 5 of 9

### REMARKS

Claims 13-20 were previously pending. Independent claims 13 and 17 are currently amended. Claims 14-16 and 18-20 are unchanged.

In the attached Declaration of Robert A. Migliorini, Plant Manager at ExxonMobil Chemical Company, Films Business, Stratford, Connecticut, Mr. Migliorini states that the 278WOS-2 film has a total polymer thickness of about 1 mil and includes five layers in accordance with Claim 13 of the above-referenced patent application as currently pending. The five layers are listed as (i) - (v) as follows:

- i) a cavitated core layer comprising polypropylene homopolymer of high stereoregularity and a cavitating agent comprising polybutylene terephthalate, said core layer having a first and a second surface;
- ii) a top tie layer comprising polypropylene and  $\text{TiO}_2$ , said top tie layer being positioned adjacent to said first surface of the core layer;
- iii) a top skin layer comprising polypropylene,  $\text{SiO}_2$  and methyl acrylate antiblock agent; said top skin layer being positioned adjacent to said top tie layer;
- iv) a bottom tie layer comprising polypropylene, said bottom tie layer being positioned adjacent to said second surface of the core layer; and
- v) a bottom skin layer comprising an ethylene-propylene-butylene terpolymer, further comprises  $\text{SiO}_2$ , silicone oil antiblock, and crosslinked silicone slip agent; said bottom skin layer being positioned adjacent to said bottom tie layer.

Furthermore, in compliance with the requirements of claim 13, the 278WOS film does not exhibit creep in a Hayssen Vertical Fill, Form and Seal (VFFS) hot tack test at 280-310°F; and wherein the film seals with a minimum of applied heat and pressure.

U.S. Serial No. 09/666,928  
Filing Date: September 21, 2000  
Docket: 10188  
Page 6 of 9

The declaration then presents a series of measurements taken on a commercial batch of the 278WOS2 film for quality control purposes yielding the data shown in Table 1 below:

**TABLE 1**

<b>PROPERTY</b>	<b>COUNT</b>	<b>MINIMUM</b>	<b>MAXIMUM</b>	<b>S.D.</b>	<b>AVERAGE</b>
<b>AVG. GAUGE</b>	14	1.072	1.106	0.012	1.091
<b>DIM STAB MD</b>	20	-6.0	-4.7	0.44	-5.4
<b>DIM STAB TD</b>	20	-7.3	-5.7	0.56	-6.5
<b>MST 200G U/U</b>	227	165	180	2.2	169.3

DIM STAB: Dimensional stability (shrinkage) percent; Shrinkage is the difference in sample length before and after heating unrestrained sample at 135°C for 7 min. MST 200G U/U: Minimum seal temperature (°F) with opposed untreated surfaces sealed.

At paragraph 8, the declaration states that Table 1 shows that the 278WOS2 film (that fulfills all the requirements of pending claim 13 of the above-captioned application), has an average dimensional stability in the machine direction (DIM STAB MD) of -5.4 percent; and an average dimensional stability in the transverse direction (DIM STAB TD) of -6.5 percent. Thus, the 278WOS2 film exhibited a low shrinkage of about 5.4% in the machine direction and about 6.5% in the transverse direction.

At paragraph 9, the declaration states that the WOW film product of pending claim 17 differs from the films of claim 13 only in the composition of the polyolefin of the top skin layer. The films of claim 13 have a top skin layer of polypropylene, whereas the films of claim 17 have a top skin layer of ethylene-propylene-butylene terpolymer and have similar

U.S. Serial No. 09/666,928  
Filing Date: September 21, 2000  
Docket: 10188  
Page 7 of 9

---

dimensional stability properties to the films of claim 13, exemplified by 278WOS2 described above.

U.S. Patent 5,691,043 (the '043 patent) to Keller and Nothnagle discloses a uniaxially heat-shrinkable, biaxially oriented, multilayer film having a polypropylene core layer containing isotactic polypropylene and a modifier which reduces the crystallinity of the polypropylene by increasing the chain imperfections or reducing isotacticity of the polypropylene core (See '043 patent abstract).

At paragraph 11, Mr. Migliorini states that neither the film of claim 13 as exemplified by 278WOS2, nor the film of claim 14 exemplified by WOW include a modifier which reduces the crystallinity of the polypropylene by increasing the chain imperfections or reducing isotacticity of the polypropylene core as required by the '043 patent.

By contrast, the '043 patent discloses at column 4, lines 42-47 that: "The composition of the polypropylene-containing core layer of the multilayer film of the present invention must provide sufficient operability so that the film after biaxial orientation exhibits crystallinity which is low enough to permit the secondary orientation of the film, which imparts the uniaxial shrinkability to the film, without tearing."

The '043 patent further discloses at column 10 under the heading "Dimensional Stability" that the resulting uniaxially shrinkable film after secondary orientation exhibits at temperatures of 100° to 145°C, say 135°C, greater than 15%, preferably greater than 18%, 20%, or even greater than 25% shrinkage in the direction of secondary orientation, e.g., machine direction. Shrinkage is determined by measuring the difference of sample length before and after placing the sample, unrestrained, in a 135°C oven for 7 minutes.

U.S. Serial No. 09/666,928  
Filing Date: September 21, 2000  
Docket: 10188  
Page 8 of 9

---

Therefore, the data of Table 1 show that the 278WOS2 film, which fulfills all the requirements of pending claim 13 of the above-captioned application, having a dimensional stability of about -5.4% (i.e., shrinkage of about 5.4%) in the machine direction and about -6.5% (i.e., shrinkage of about 6.5%) in the transverse direction, exhibits significantly lower shrinkage characteristics than the films of the '043 patent.

The '043 patent is directed to uniaxially shrinkable films. The films of the '043 patent have a dimensional stability of -15% to -25% (i.e., shrink at least 15 to 25 percent when heated and unrestrained), or even greater shrinkability.

At paragraph 14, Mr. Migliorini states that the '043 patent does not disclose or suggest, or even hint at films of dimensional stability of about -5.4% in the machine direction or -6.5% in the transverse direction (i.e. low shrinkage films).

In summary, Mr. Migliorini states, the films of the present invention are clearly distinct from the uniaxially shrinkable films having a polypropylene core layer including a modifier which reduces the crystallinity of the polypropylene as specified by the '043 patent. Further, the disclosure of the '043 patent would not have led one of ordinary skill in the art to the presently claimed invention of heat-sealable multilayer films with low shrinkability in both the machine direction and the transverse direction.

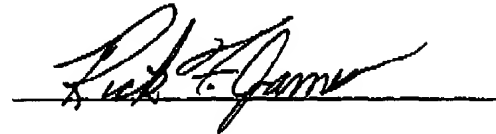
Applicants therefore maintain that the teachings of highly shrinkable films of the '043 patent of Keller and Nothnagle clearly teaches away from the low shrinkage sealable packaging films of the present invention.

U.S. Serial No. 09/666,928  
Filing Date: September 21, 2000  
Docket: 10188  
Page 9 of 9

If resolution of any remaining issue is required prior to allowance of the application, it is respectfully requested that the Examiner contact Applicants' undersigned attorney at the telephone provided below.

Respectfully submitted,

Date: February 25, 2003



Rick F. James  
Registration No. 48,772

ExxonMobil Chemical Company  
Law Technology  
P.O. Box 2149  
Baytown, Texas 77522-2149  
Telephone No. (281) 834-2438  
Facsimile No. (281) 834-2911